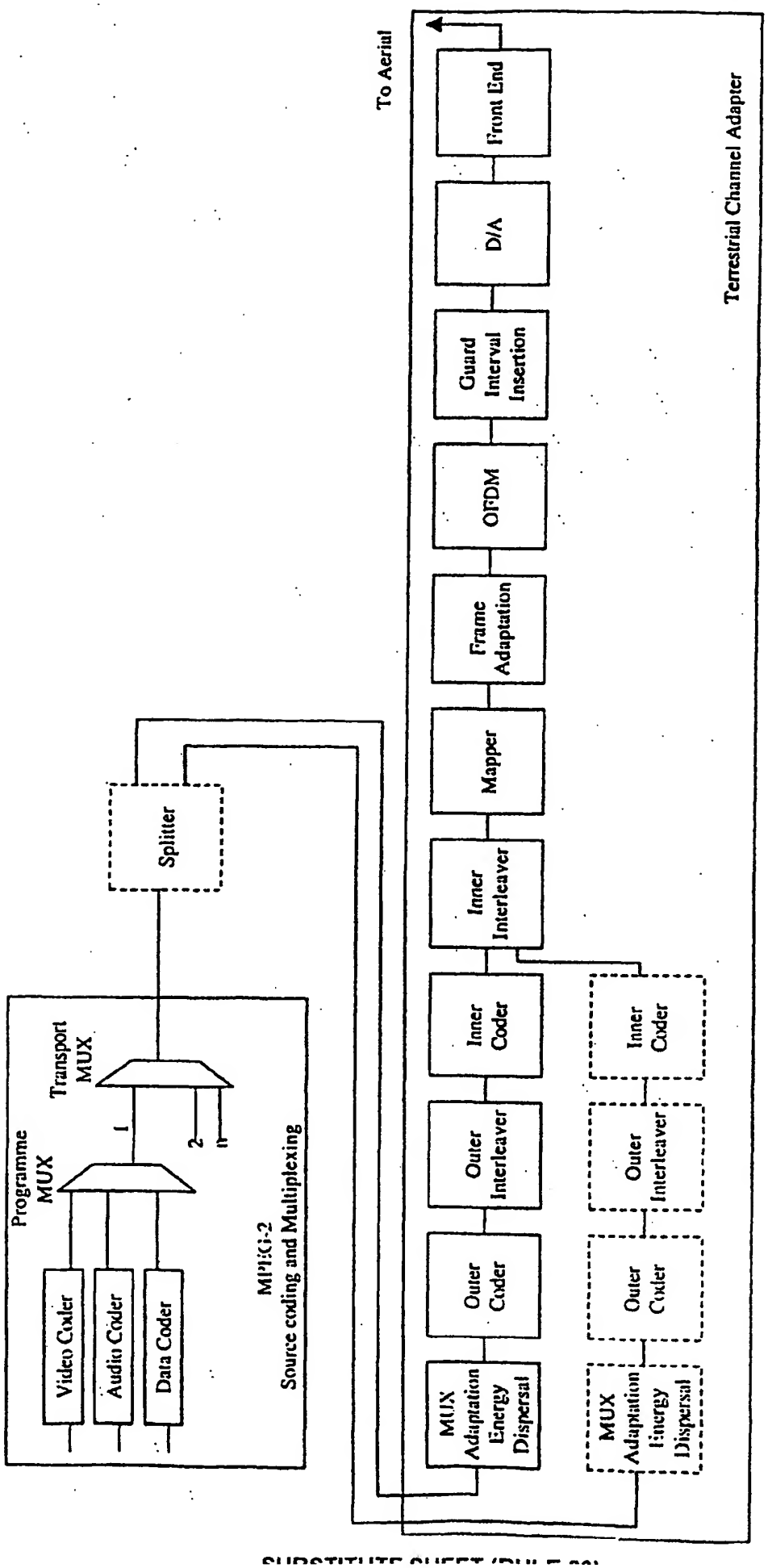

Terrestrial Channel Adapter
To Aerial
Front End
D/A
Guard Interval Insertion
OFDM
Frame Adaptation
Mapper
Inner Interleaver
Inner Coder
Outer Interleaver
Outer Coder
MUX Adaptation Energy Dispersal
Inner Coder
Outer Interleaver
Outer Coder
MUX Adaptation Energy Dispersal
Splitter
MPEG-2 Source coding and Multiplexing
Programme MUX
Transport MUX
1
2
n
Video Coder
Audio Coder
Data Coder

Fig.1

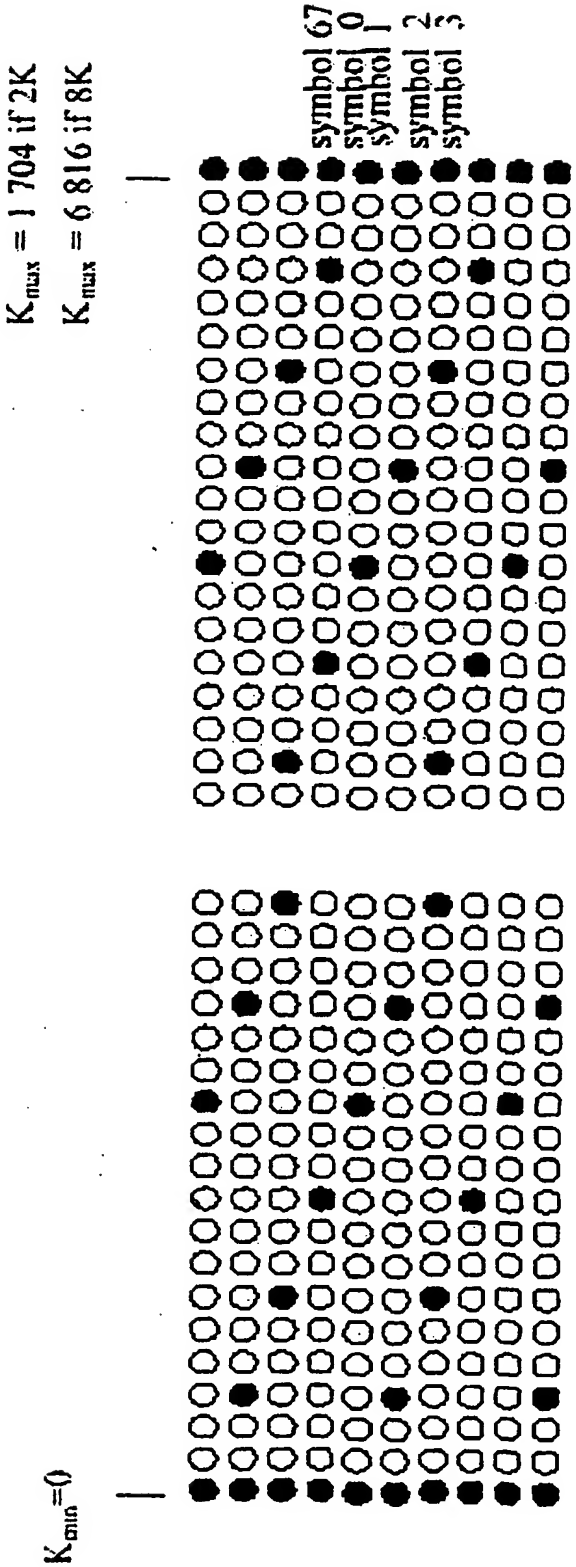

symbol 67
symbol 0
symbol 1
symbol 2
symbol 3
K_{max} = 1 704 if 2K
K_{max} = 6 816 if 8K
K_{min}=0

Fig.2

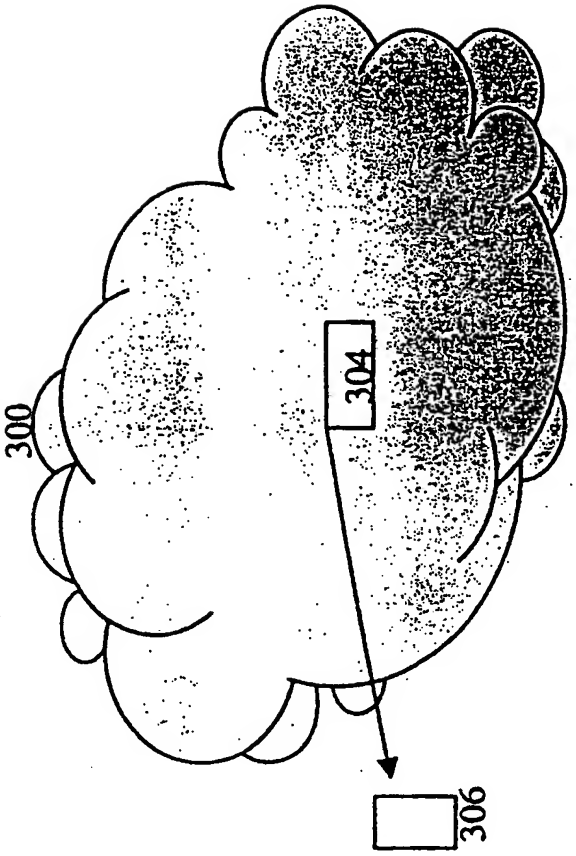


Fig.3

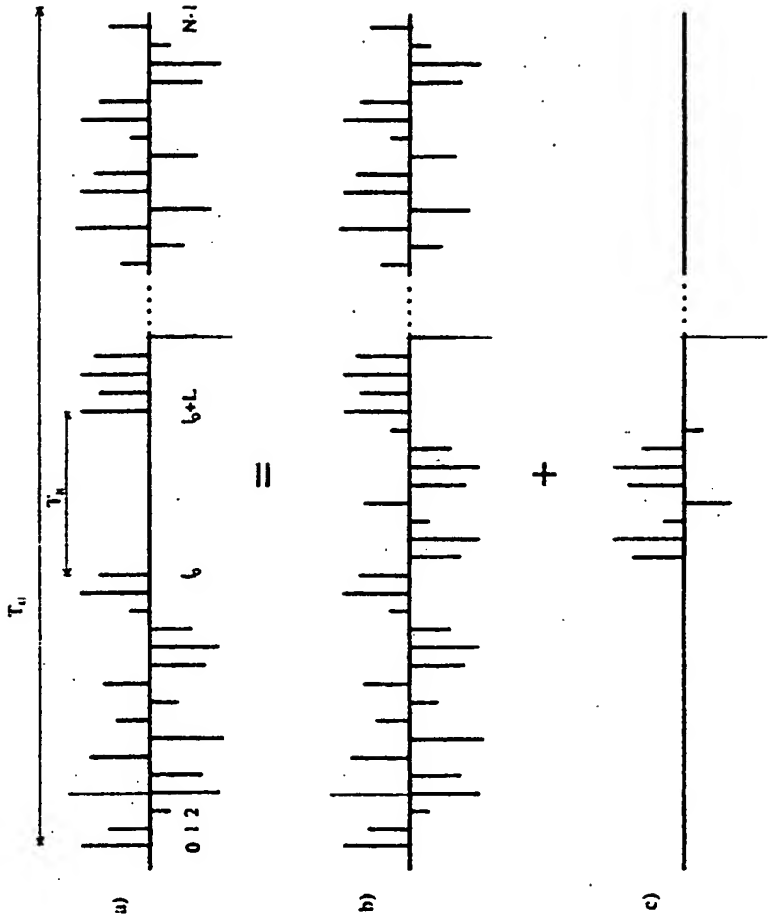


Fig. 4

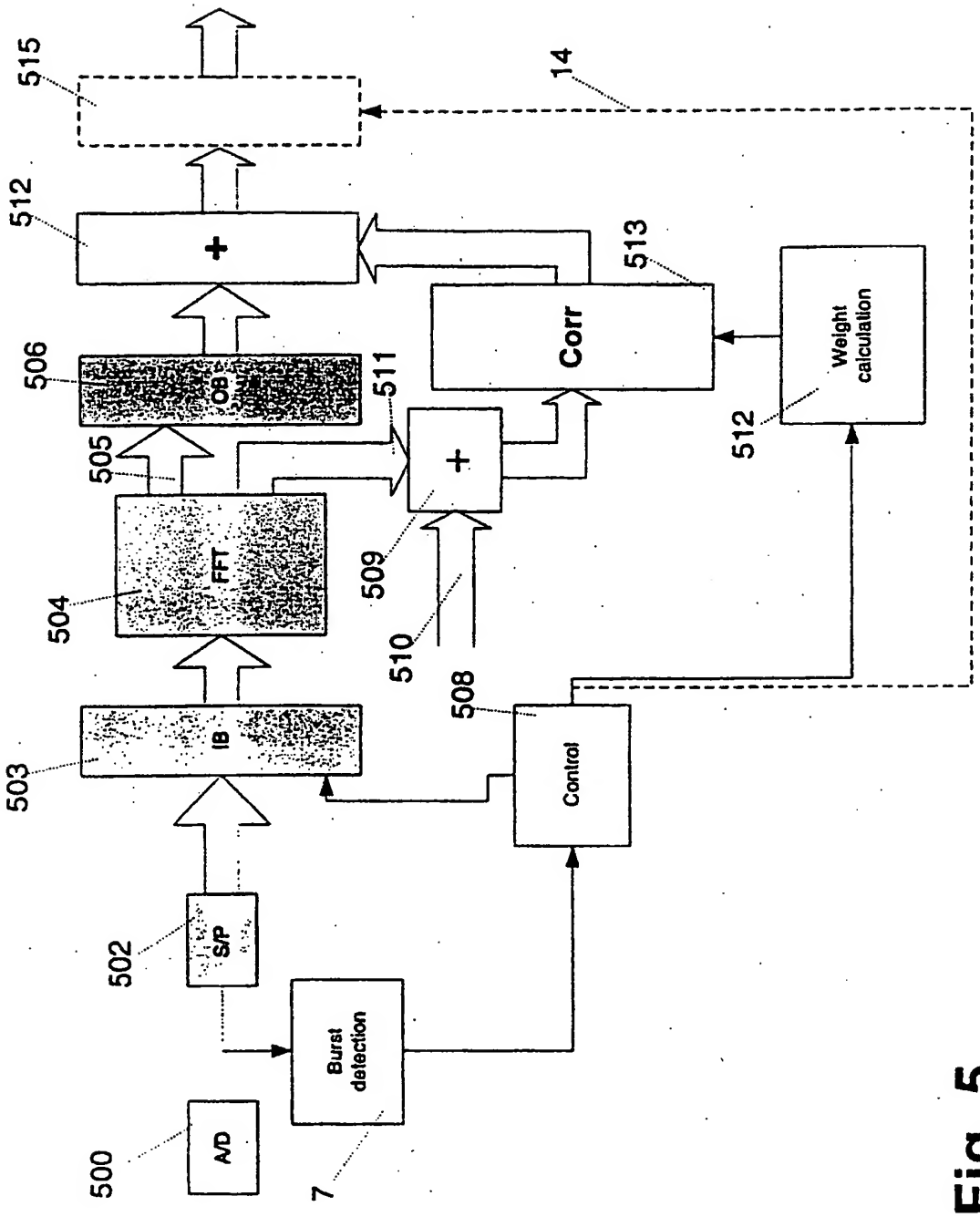
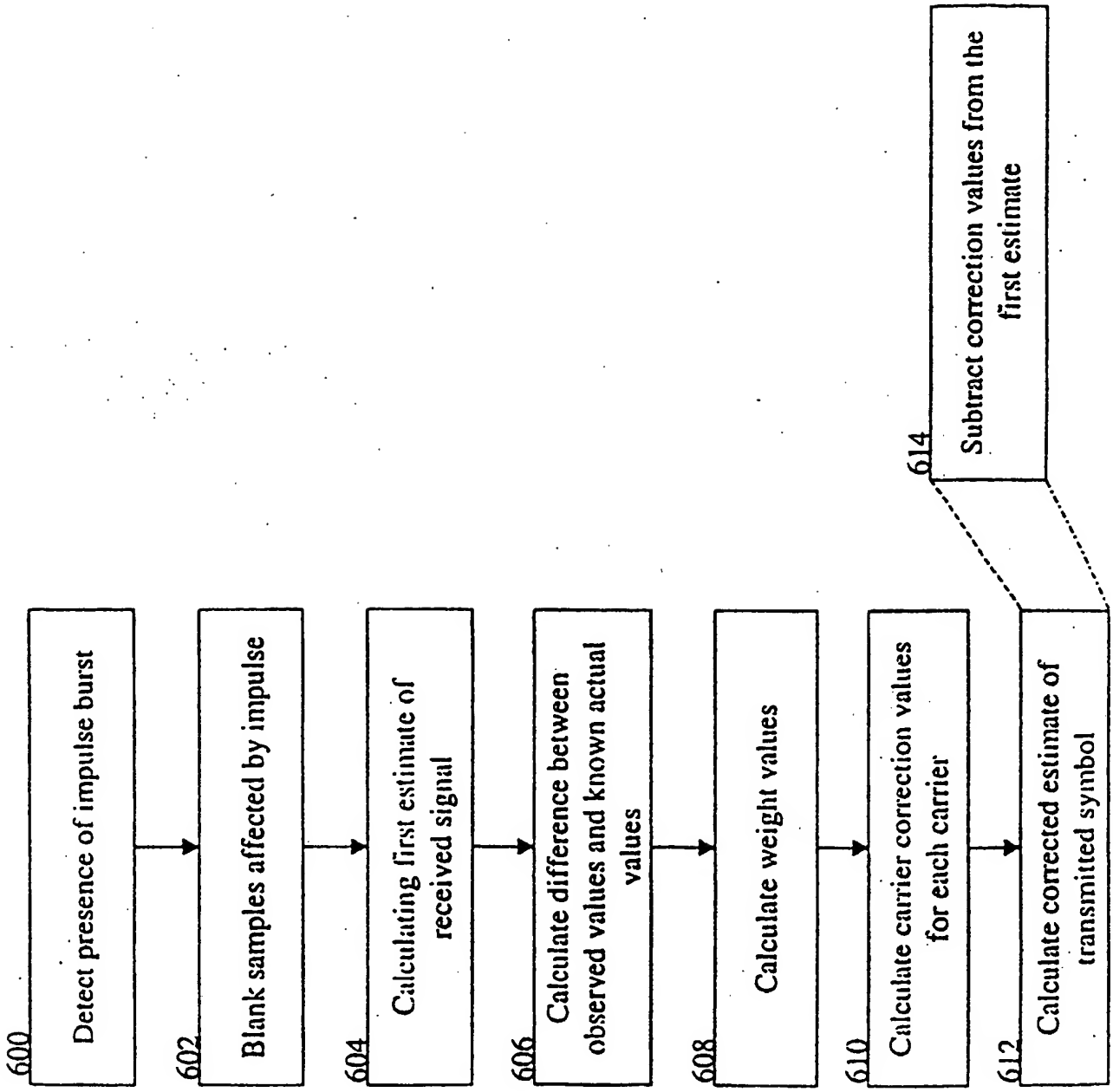

515
14
512
+
513
Corr
Weight calculation
506
OB
511
505
+
512
FFT
509
504
510
508
IB
Control
503
S/P
502
Burst detection
A/D
500
7

Fig. 5

Fig.6


600
Detect presence of impulse burst
602
Blank samples affected by impulse
604
Calculating first estimate of received signal
606
Calculate difference between observed values and known actual values
608
Calculate weight values
610
Calculate carrier correction values for each carrier
612
Calculate corrected estimate of transmitted symbol
614
Subtract correction values from the first estimate

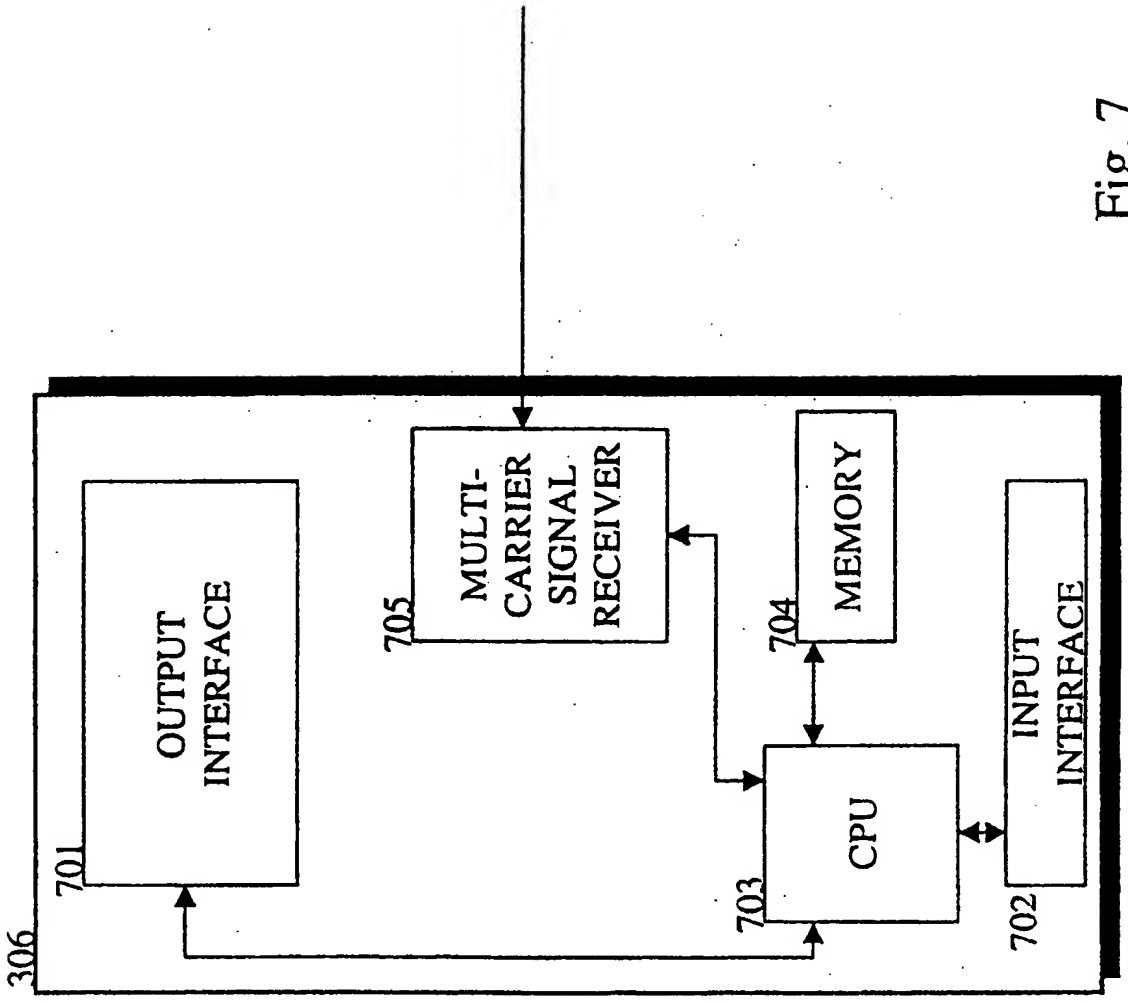

306
701
OUTPUT INTERFACE
705
MULTI-CARRIER SIGNAL RECEIVER
704
MEMORY
703
CPU
702
INPUT INTERFACE

Fig. 7

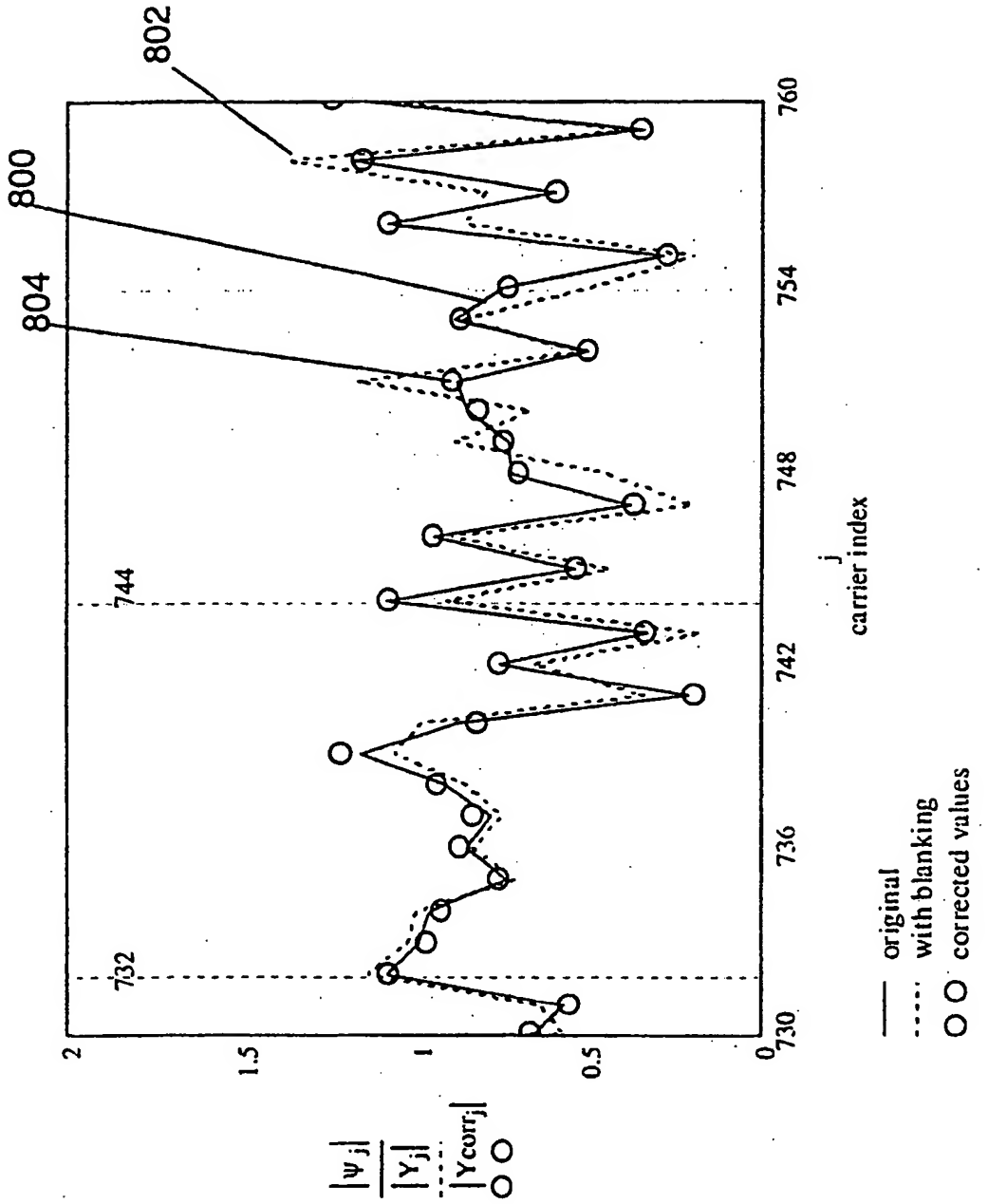

802
800
804
744
732
760
754
748
742
736
730
2
1.5
1
0.5
0
j
carrier index
original
with blanking
corrected values
|ψj|
|Yj|
|Ycorrj|

Fig. 8

10/517937

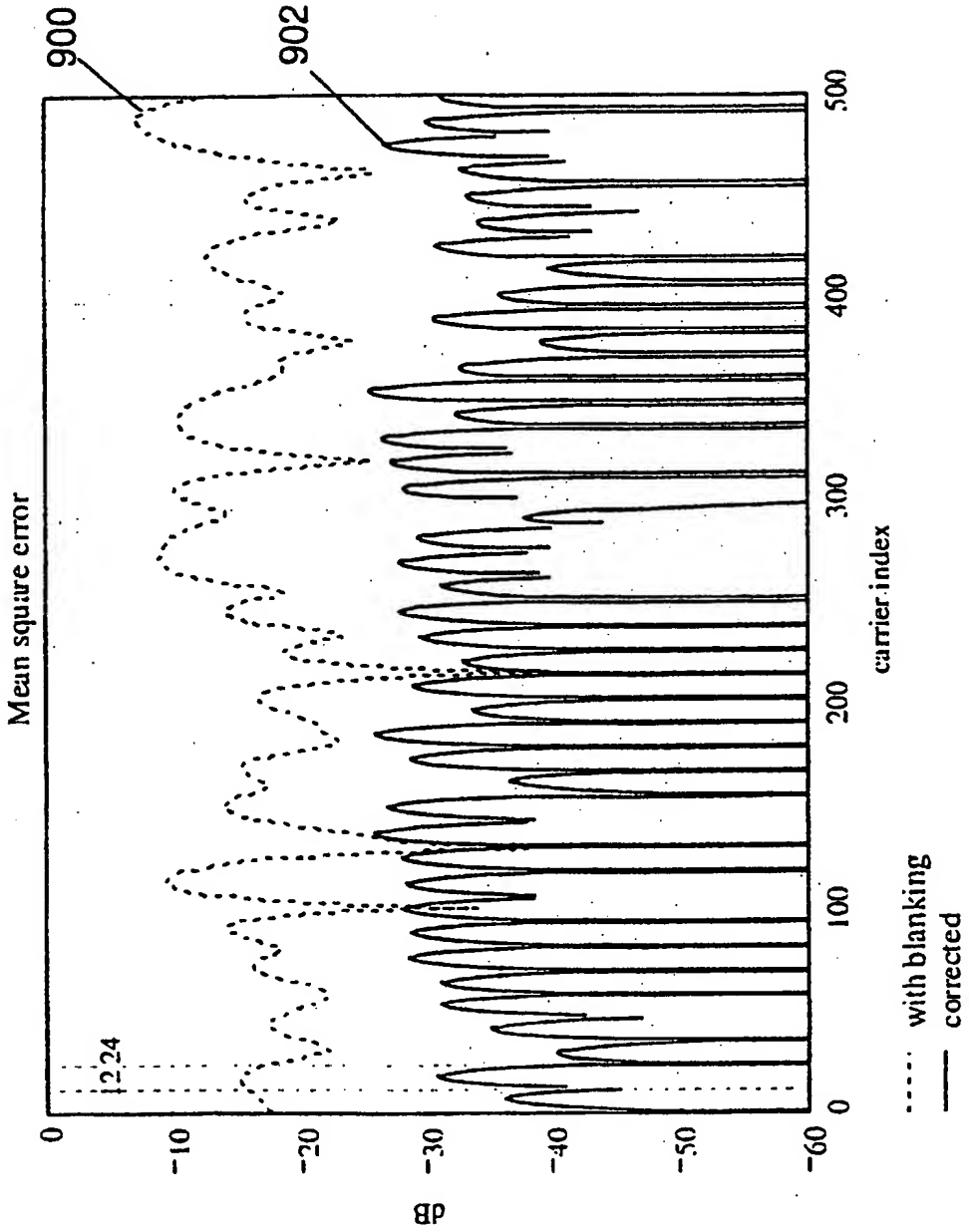


Fig. 9